

Herb Weisberg

An interview with the statistician-turned-author of *Data Games*

After a career as a statistical consultant, what inspired you to write a book about ... a statistical consultant brought in to investigate a threat against a pharma company related to a clinical trial?

I thought it would be fun for statisticians, and maybe scientists generally, to imagine someone like themselves in an adventure like this. During my career, I have been involved in many interesting legal cases that revolved around statistical issues. So why not build on some of these experiences? But there's also a more serious reason. It seems to me that the profile of statisticians remains rather low, and what we contribute is often misunderstood and underestimated by others. Early in my career, my parents always struggled to explain what exactly their son did for a living. Of course, it's much different today, but many still regard us simply as number-crunchers, something like accountants. For me, statistical modelling and analysis is all about solving complex puzzles in a real-world context where the solutions really matter. So I wanted to convey the sense of excitement that often entails, exaggerated just a bit for dramatic effect, of course.

Speaking of drama: your protagonist Ken Wheeler finds himself in some potentially deadly situations. What is the worst you have had to deal with as a real-life statistical consultant?

Well, thankfully I have never felt physically threatened because of my work. But there was one occasion when I was consulting for a company in Boston. During my lunch break, I popped into a local bank branch to get some cash, when two gunmen broke in. One pointed a gun at the tellers, while the other demanded that the ten or so customers all lie on the floor. That was the longest few minutes of my life. I've felt "under the gun" many times to meet tight deadlines, but the real thing feels quite different, I can tell you.

Your story touches upon a number of issues relating to potential misuses of statistics. Did you intend the book in part



as a cautionary tale for statisticians or perhaps even the general public?

I do have a number of serious concerns about the ways in which data and analyses can be twisted, either deliberately or inadvertently. In my career, I've witnessed many examples, some quite egregious. While the book was written before the current pandemic, the issues of data integrity and accurate reporting have recently come to the fore in that context. As my fictional hero mentions, our entire system of medical research is predicated on trust in the numbers. Regrettably, we live in a moment when many people lack trust in science generally, and statistics in particular. This mistrust is compounded when instances of data manipulation or distortion surface. So I did want to highlight some of these issues.

***Data Games* is billed as a "techno-thriller", which makes me think particularly of the books of Michael Crichton. Are you a fan of his, and are there other authors who inspired you?**

Crichton is certainly one of my favourites. More recently, I was influenced by *The Martian*, by Andy Weir. I enjoy stories that portray science and technology realistically, but in a very accessible way. I thought Weir did an excellent

job of that. I also read a lot of mystery novels as I was writing. I've always loved the Harry Bosch books by Michael Connolly and, more recently, the Ann Cleeves *Shetland* series. But for my money, you can't top the Arkady Renko novels by the incomparable Martin Cruz Smith.

This is your first novel, after several non-fiction books about applied statistics. Which of the two types of book is harder to write?

Oh, that probably needs an essay to answer properly. Non-fiction is much more demanding in terms of fidelity to truth, which can require a lot of research. In writing *Willful Ignorance*, I spent a year doing the background historical research before starting to write. Fiction is, of course, much easier in that respect. You just make things up as you go along! This freedom was intoxicating, but also daunting. There are so many "degrees of freedom" that it felt a bit disorienting. Writing dialogue was also a totally new experience for me. I was flying blind, as I had no previous training in this at all. I think my "method" was to envision myself in Wheeler's shoes and imagine what I would say and how my interlocutors might respond. I've had enough interactions with lawyers over the years to draw on.

I honestly cannot think of any other novels with a statistician as protagonist. I guess statistics was the "hero" (of sorts) in Michael Lewis's *Moneyball*. But why have statisticians had to wait so long for a starring role like this?

The television show *Numbers* had some close parallels. The main character was a mathematical genius who worked with the FBI to solve mysteries, often employing statistical methods. But I don't know of anything similar in literature. Why not? Perhaps there's a statistical answer. First, the number of statisticians is minuscule compared with many other professions. Second, the proportion of statisticians who are excellent writers is, regrettably, quite small. I suspect, though, that as the field is becoming so popular, other fictional statisticians may start to pop up. That might help more people to realise how interesting our work can be. As John Tukey famously said, we get to play in everyone else's sandbox. ■

Data Games, by H. I. Weisberg, is out now and available through Amazon.